

Attorney Docket No.: WARF-0002
Inventors: Laughon, Allen S.
Serial No.: 09/810,385
Filing Date: March 16, 2001
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for identifying compounds that directly interact with a Smad protein or a DNA-binding Smad protein co-repressor protein to prevent protein-protein or protein-DNA interactions required for repression of transcription from genes induced by TGF- β , activin or bone morphogenetic protein signaling in cells comprising:

(a) ~~determining~~ detecting a first level of transcription of a reporter with a Smad box-containing promoter ~~detected~~ in cells containing interacting proteins comprising a Smad protein, a DNA-binding Smad protein co-repressor protein and a CtBP protein before addition of a test compound;

(b) contacting said cells with the test compound; ~~and~~

(c) ~~determining~~ detecting a second level of transcription of the reporter ~~detected~~ in the cells ~~containing interacting proteins comprising a Smad protein, a Smad protein co-repressor and a CtBP protein~~ after addition of the test compound; and

(d) comparing the first level with the second level, wherein a decrease in the level of repression of transcription of the reporter ~~induced~~ in said cells after addition of the test compound ~~containing interacting proteins comprising the Smad protein, the Smad protein co-repressor and the CtBP protein~~ is indicative of the ability of the test compound to interfere with transcriptional repression ~~and to prevent repression of~~

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~~transcription that is produced~~ of genes induced by a TGF- β ,
activin or bone morphogenetic protein signal in cells.

Claim 2 (currently amended): The method of claim 1 wherein
transcription levels of the reporter both before and after
addition of the test compound are detected in cells containing a
Smad protein, a CtBP protein, and a DNA-binding Smad co-repressor
protein selected from the group consisting of Evi-1, TGIF, SIP1,
and Schnurri.

Claim 3 (original): The method of claim 1 wherein the Smad
protein is *Drosophila* Mad or Medea.

Claim 4 (currently amended): The method of claim 1 wherein
the CtBP protein is dCtBP, CtBP2 or a functional homologue of
dCtBP.

Claims 5-8 (canceled).